

Work Order ID 164917

Wednesday, August 09, 2017 2:41:45 PM

164917

Page 1

Item ID: D2666-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Saddle, LH, Fwd, Aft, In
 Start Date: 8/1/2017 Start Qty: 2.00 ***2*** Cust Item ID:
 Required Date: 8/14/2017 Req'd Qty: 2.00 ***2*** Customer:
 Reference:

Approvals: Process Plan: DAG 21 Date: AUG 09 2017 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: 8-09 Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D2666	Rev D

100

1.12

100

HAAS 1

HAAS CNC VERTICAL MACHINING #1

Memo

1.83

HAAS CNC vertical machine #1

Program batch number.1- Inspect part number and batch number are programmed correctly.2- Machine Step No 1 of Folio and visually inspect as per attached Dimension Sheet 3- Machine Step No 2 of Folio and visually inspect as per attached Dimension Sheet

2 0 anf/SBL 17/9/7

110

0.00

110

Mill Conv

CONVENTIONAL MILLING MACHINE

Memo

0.04

Conventional Milling Machine

Machine Keyway and inspect per attached dimension sheet

2 0 anf/SBL 17/9/7

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Memo

0.02

Quality Control

2 0 anf/SBL 17/9/7

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					

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 Required Date: 8/14/2017 Req'd Qty: 2.00 ***2*** Customer:
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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.04		<i>B.a</i>	<i>17-09-27</i>	<i>2</i>	<i>0</i>		<i>DAS</i> <i>08</i> <i>9-09</i>
140 *140* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.15				<i>(2)</i>	<i>0</i>	<i>2017-09-27</i>	<i>JSC</i>
150 *150* Powdercoat Powder Coating	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum <i>M 138641</i> Memo START TIME: <i>11:20</i> OVEN TEMPERATURE: <i>300</i> FINISH TIME: <i>11:00</i>	0.00 0.21				<i>2</i>	<i>0</i>	<i>1709-27</i>	<i>13</i> <i>04</i> <i>09-09</i>

DQA: _____ Date: _____



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Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : ☐					

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Page 3

Item ID: D2666-1

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Saddle, LH, Fwd, Aft, In

Start Date: 8/1/2017 Start Qty: 2.00

2

Cust Item ID:

Required Date: 8/14/2017 Req'd Qty: 2.00

2

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start

NR1

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	QC3- Inspect Part Finish	0.00							
160									
QC	Memo	0.02				2			DAS 38 9-89 SEP 27 2017
Quality Control									
170	Identify as per dwg & Stock Location: <u>5402</u>	0.00							
170									
Packaging	Memo	0.02				2		SEP 27 2017	<u>ml</u>
Packaging									
180	QC21- Final Inspection - Work Order Release	0.00							
180									
QC	Memo	0.20							
Quality Control									

17/9/27 ml

um 17/9/27

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

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Page 1

Work Order ID: 164917

164917

Parent Item: D2666-1

D2666-1

Parent Item Name: Saddle, LH, Fwd, Aft, In

Start Date: 8/1/2017

Required Date: 8/14/2017

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP: C00.11.01Removed P/O for Powder Coat - in house processEC
IPP Rev:D As per Rev D 07-03-19 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-001		Manufactured	No			100	Each	61.0000	1	2			
D6101-001									**				
Saddle Billet													

Location

Loc Qty

Loc Code

MAT042

61

161493

1

162701

20

164094

40

2

sh
17/09/02 / SBL

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

DART AEROSPACE LTD		Work Order: 164917
Description: 206 Saddle, Inboard, Left side		Part Number: D2666-1
Inspection Dwg: D2666 Rev: D DSK: Rev:		Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				1	2	3	4	5
A	0.100	0.140		.120	.120			
B	0.100	0.140		.130	.130			
C	2.470	2.510		2.490	2.490			
D	0.100	0.180		.130	.130			
E	0.210	0.230		.220	.220			
F	1.313	1.343		1.326	1.326			
G	0.240	0.260		.248	.248			
H	0.615	0.685		.650	.650			
I	1.125	1.145		1.138	1.137			
J	0.990	1.010		1.003	1.003			
K	0.235	0.240		.238	.238			
L	0.510	0.515		.510	.511			
M	0.100	0.120		.120	.120			
N	1.565	1.585		1.577	1.575			
O	5.990	6.010		6.000	6.000			
P	1.245	1.255		1.250	1.250			
Q	2.495	2.505		2.500	2.500			
R	0.490	0.510		.500	.498			
S	0.312	0.318		.314	.314			
T	2.495	2.505		2.500	2.500			
U	1.357	1.367		1.362	1.362			
V	0.315	0.322		.316	.316			
W	0.540	0.560		.545	.546			
X	1.674	1.684		1.679	1.679			
Y	0.256	0.262		.258	.258			
Z	0.178	0.198		.188	.188			
AA								
AB								
AC								
AD								
AE								
Accept/Reject								

Measured by: SBL/PM	Date: 17/09/17
Audited by: B.C	Date: 17-09-27
Prototype Approval:	Date:

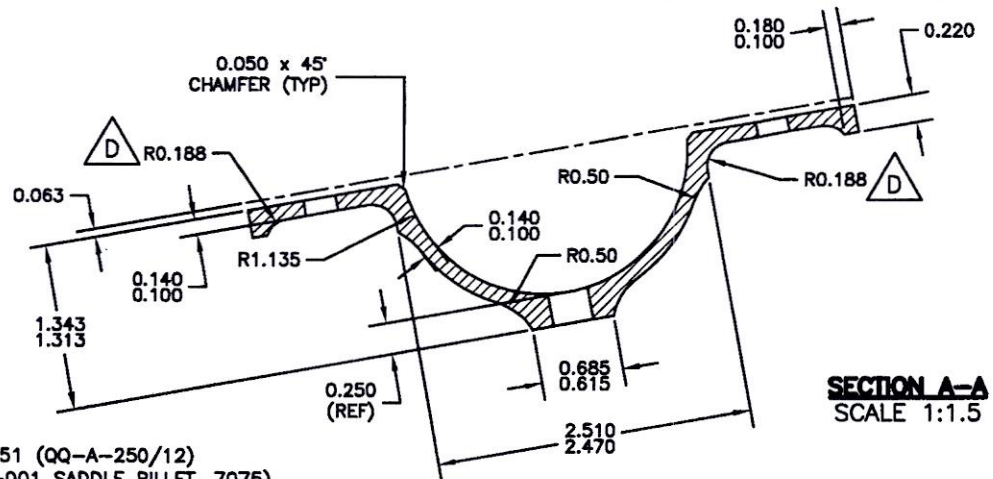
Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	99.04.19	Incorporated DSI 9095, DSI 9102 & DSI 9122 Rev. A	RF	
C	99.11.10	Added Dim. R-T	RF	
D	02.12.12	Reformat; Added Dim. U-W & DT8683, DT8686 & DT8695 A/B	KJ/RF	
E	06.06.30	Dimension revised per drawing revision C	KJ/JLM	
F	06.09.19	Reference to DT8888 added to Dim N	KJ/EC	
G	07.03.21	Revised per drawing revision D	KJ/JLM	
H	12.03.08	Dimension S and Y revised	KJ	M

DART

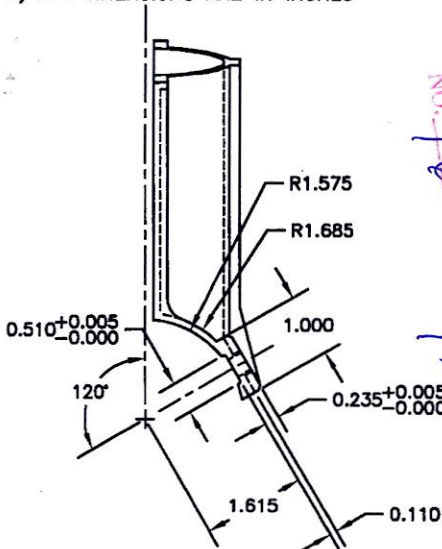
RELEASED

07.02.12

DESIGN	DRAWN BY	DART AEROSPACE USA, INC.	
		PORT HADLOCK, WA	
CHECKED	APPROVED	DRAWING NO.	REV. D
		D2666	SHEET 1 OF 1
DATE		TITLE	SCALE
06.11.08		SADDLE FWD INSIDE HIGH	1:3
A	97.03.25	NEW ISSUE	
B	97.07.11	ANGLE AND NOTES ADDED	
C	06.05.26	INCORPORATE DEO 9122, 9102, 9095	
D	06.11.08	R0.188 WAS R0.30; $\phi 0.316$ WAS $\phi 0.313$	

**NOTES:**

- 1) MATERIAL: ALUMINUM 7075-T7351 (QQ-A-250/12)
(MAKE FROM D6101-001 SADDLE BILLET, 7075)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 5) D2666-1 SHOWN (D2666-2 IS OPPOSITE)
- 6) ALL DIMENSIONS ARE IN INCHES

**D2666-1 SADDLE FWD INSIDE HIGH**

NO. 164912-M-58-04

WORK ORDER

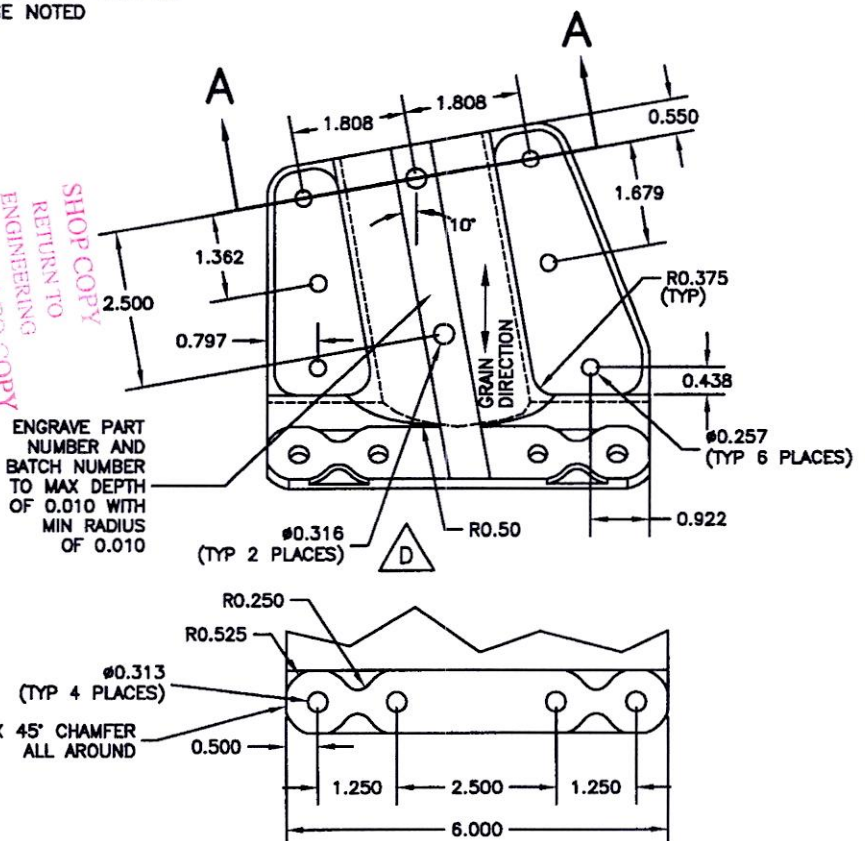
UNCONTROLLED COPY

ENGINEERING

RETURN TO

SHOP COPY

ENGRAVE PART NUMBER AND BATCH NUMBER TO MAX DEPTH OF 0.010 WITH MIN RADIUS OF 0.010



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